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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,028	03/16/2001	Klaus Bergemann	P 277112 000131 RS	5588

909 7590 10/25/2002
PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

LISH, PETER J

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 10/25/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,028

Applicant(s)

BERGEMANN ET AL.

Examiner

Peter J Lish

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. While claim 2 clearly states that the organic group to be bonded to the carbon black has the structure $R-S_x-R$, this limitation is inconsistent with that of claim 1, to which it depends. Claim 1 states that the carbon black is bonded to the organic group through the sulfur component, however the limitation of claim 2 contradicts this claim, as the sulfur groups are already fully bonded. It is also unclear if both R groups are the same or not. Perhaps "R is independently selected from..." is meant.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolff et al. (USPN 5,159,009).

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Wolff discloses the reaction of a carbon black with an organosilicon compound of the claimed formula (column 1, line 61) where it is stated that [B] may represent $-S_X-$ when q is 2, and X represents a number from 2 to 8. Furthermore, the R groups may represent alkyl or phenyl groups, which may be the same or different. Bonded to the R group may be a trialkoxysilyl group, which may or may not be further functionalized ($n = 0, 1, \text{ or } 2$). These carbon blacks and organosilicon compounds are reacted by mixing the two, and heating the mixture for 1-60 minutes at 50-160 °C in a suitable tempering unit (column 2, lines 29-39).

The reaction of Wolff is identical to that disclosed by the present invention. Thereby, the products obtained by Wolff are expected to be identical. This is further supported in that Wolff teaches the organosilicon compounds which are bound to the carbon black can no longer be extracted by means of organic solvent. Thus it is apparent that the organosilicon compounds are chemically bonded to the carbon material by way of a sulfide or polysulfide bridge.

Regarding claim 7, the modified carbon black of Wolff is applied as a filler in rubber mixtures.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolff et al.

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Wolff teaches that under preferable conditions, only the amount of organosilicon compound which can be bound to the carbon black is mixed, thereby making a solvent unnecessary. However, Wolff teaches that the reacted organosilicon compounds cannot be extracted by solvent, and further that solvent may be necessary to extract unreacted organosilicon compounds. It would thus be obvious to one of ordinary skill at the time of invention to add the solvent simultaneously with the organosilicon compound to the carbon black, to facilitate the removal of excess organosilicon compounds, whereby no negative effects on the reaction are expected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Lish whose telephone number is 703-308-1772. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



PL
October 21, 2002

**STUART L. HENDRICKSON
PRIMARY EXAMINER**